Amendments to the Claims:

This listing of claims will replace all prior versions, and listing, of claims in the application.

1. (Currently Amended) A powderous transition metal compound comprising:

at least 85 % w/w of transition metal and oxygen,

wherein the powder includes particles, which have a significant spatial change of transition metal stoichiometry, having an average transition metal composition $M=(Mn_{1-u}Ni_u)_{1-y}Co_y$ where $0.2<u<0.7$ and $0.1 < y < 0.9$,

wherein the average transition metal composition of cobalt as well as manganese as well as nickel in the outer bulk differ by at least 10% in stoichiometry from the average transition metal composition of the inner bulk,

~~where the average transition metal compositions in the outer bulk differ by at least 10% from the average transition metal compositions of the inner bulk,~~

the inner bulk being specified as a region around the center of the particle including about 50% of the total number of ~~transition metal~~cobalt, nickel and manganese atoms of the particle.

2. (Cancelled)

3. (Currently Amended) The powderous transition metal compound according to ~~claim 2~~claim 1, having average transition metal composition $M=(Mn_{1-u}Ni_u)_{1-y}Co_y$ ~~$M=(Mn_{1-u}Ni_u)_{1-y-z}Co_y$~~ where $0.4<u<0.65$ and $0.2< y <0.9$,

wherein the average transition metal compositions of cobalt as well as manganese as well as nickel in the outer bulk differ by at least 15% in stoichiometry from the average transition metals of the inner bulk.

4. (Currently Amended) The powderous transition metal compound according to ~~claim 2~~claim 1, having average transition metal composition ~~$M=(Mn_{1-u}Ni_u)_{1-y-z}Co_y$~~ $M=(Mn_{1-u}Ni_u)_{1-y}Co_y$ where $0.4<u<0.65$ and $0.2 < y < 0.9$,

wherein the powder consists of particles which have the same crystal structure everywhere in the bulk of the particle.

5. (Currently Amended) The powderous transition metal compound according to claim 1~~claim 2~~, having average transition metal composition ~~$M=(Mn_{1-u}Ni_u)_{1-y-z}Co_y$~~ $M=(Mn_{1-u}Ni_u)_{1-y}Co_y$ where $0.4<u<0.65$ and $0.2 < y < 0.9$,

wherein an inner bulk is a lithium transition metal oxide with layered crystal structure with space group r-3m.

6. (Currently Amended) A powderous lithium metal oxide, wherein at least 90% of the metal is transition metal with an average transition metal composition ~~$M=(Mn_{1-u}Ni_u)_{1-y-z}Co_y$~~ $M=(Mn_{1-u}Ni_u)_{1-y}Co_y$ where $0.4<u<0.65$ and $0.2 < y < 0.9$,

the powder consisting of particles which have

- the same layered crystal structure with space group r-3m everywhere in the bulk of typical particles

- a significant spatial change of transition metal stoichiometry, where the average transition metal compositions of cobalt as well as manganese as well as nickel in the outer bulk differ by at least 10% in stoichiometry from the average transition metal compositions of the inner bulk,

the inner bulk being specified as a region around the center of the particle including about 50% of the total number of cobalt, nickel and manganese atoms of the particle.

7. (Currently Amended) The powderous lithium metal oxide according to claim 6, wherein at least 95% of the metal is transition metal with average composition ~~$M=(Mn_{1-u}Ni_u)_{1-y-z}Co_y$~~ $M=(Mn_{1-u}Ni_u)_{1-y}Co_y$ where $0.4<u<0.65$, and $0.25 < y < 0.45$ or $0.65 < y < 0.85$,

the powder consisting of particles which have continuous spatial change of transition metal stoichiometry.

8. (Currently Amended) The powderous lithium metal oxide according to claim 7, wherein the transition metal has ~~having~~ average composition ~~$M=(Mn_{1-u}Ni_u)_{1-y-z}Co_y$~~ $M=(Mn_{1-u}Ni_u)_{1-y-z}Co_y$ where $0.4<u<0.65$ and $0.65 < y < 0.85$,

wherein the inner bulk has an average transition metal composition ~~$M=(Mn_{1-u}Ni_u)_{1-y-z}Co_y$~~ $M=(Mn_{1-u}Ni_u)_{1-y}Co_y$ where $0 \leq u \leq 1$ and $0.75 \leq y \leq 1$.

9. (Currently Amended) A method for preparing powderous transition metal compounds according to claim 1, comprising at least one precipitation reaction,

wherein at least one solution of dissolved transition metal salt and at least one solution of dissolved hydroxide of carbonate salts are added to particles acting as seeds; dissolved transition metal cations and dissolved hydroxide or carbonate anions form a solid precipitate; and the precipitate forms a layer covering the seed particles,

the precipitate having a transition metal composition M2, which differs from the composition M1 of the seed particles by at least 10%.

10. (Currently Amended) The method according to claim 9, wherein the precipitate has a transition metal composition $M2=Mn_{1-a-b}Ni_aCo_b$-, which differs significantly from the composition $M1=Mn_{1-a'-b'}Ni_{a'}Co_{b'}$ of the seed particles, significantly being defined that the ~~absolute~~ value $N_i / A_i > 0.1$, in which N_i is the difference of averaged local concentrations between in the inner bulk and in the outer bulk for each component i and A_i is the concentration of the component i averaged over the whole bulk, wherein i is chosen from Co, Mn and Ni~~$|N_i|>0.1$ for all numbers $N_a=(a'-a)/a'$, $N_b=(b'-b)/b'$ and $N_c=(c'-c)/c'$~~.

11. (Currently Amended) The method according claim 10, wherein the seed particles are a lithium metal oxide where at least 95% of the metal is transition metal with average composition ~~$M=(Mn_{1-u}Ni_u)_{1-y-z}Co_y$~~ $M=(Mn_{1-u}Ni_u)_{1-y}Co_y$ where $0.4<u<0.65$ and $0 \leq y \leq 1.0$ having a layered crystal structure with space group r-3m.

12. (Currently Amended) A method according claim 11, where the seed particles are

a lithium metal oxide where at least 95% of the metal is transition metal with average composition ~~$M=(Mn_{1-u}Ni_u)_{1-y-z}Co_y$~~ $M=(Mn_{1-u}Ni_u)_{1-y}Co_y$ where $0.4<u<0.65$ and $0.75 \leq y \leq 1.0$ having a layered crystal structure with space group r-3m.

13. (Currently Amended) The method according to claim 9, wherein the precipitate further includes ~~further~~ at least one selected from the group consisting of anions chosen from SO_4^{2-}, Cl^-, F^- and~~/or further~~ cations chosen from Na^+, K^+, Li^+, and the total concentration of these anions and cations exceed 0.01 mol per 1 mol transition metal of the precipitate.

14. (Currently Amended) The method according to claim 13, wherein the content of ~~further~~ the anions and~~/or~~ cations in the precipitate is modified by an ion exchange reaction, following after the precipitation reaction.

15. (Currently Amended) A method for preparing powderous lithium transition metal compounds according to claim 1, comprising:

at least one precipitation reaction,

wherein at least one solution of dissolved transition metal salt and at least one solution of dissolved hydroxide of carbonate salts are added to particles acting as seeds; dissolved transition metal cations and dissolved hydroxide or carbonate anions form a solid precipitate; and the precipitate forms a layer covering the seed particles, the precipitate having a transition metal composition M2, which differs from the composition M1 of the seed particles by at least 10%;

a heat treatment between 110-350°C to modify the precipitate~~-~~; and

a solid state reaction of the modified precipitate with a source of lithium.

16. (Currently Amended) The method according to claim 15 to prepare powderous lithium transition metal compounds,

wherein at least 90% of the metal is transition metal with average composition ~~$M=(Mn_{1-u}Ni_u)_{1-y-z}Co_y$~~ $M=(Mn_{1-u}Ni_u)_{1-y}Co_y$ where $0.4<u<0.65$ and $0.2 < y < 0.9$,

the powder consisting of particles which have

- the same layered crystal structure with space group r-3m everywhere in the bulk of

typical particles

- a significant spatial change of transition metal stoichiometry, where the average transition metal compositions of cobalt as well as manganese as well as nickel in the outer bulk differ by at least 10% from the average transition metal compositions of the inner bulk,

the inner bulk being specified as a region around the center of the particle including about 50% of the total number of cobalt, nickel and manganese atoms of the particle; and

wherein the lithium transition metal compound basically is free of further anions and cations including Cl^-, SO_4^{2-}, Na^+ and~~/or~~ K^+, by removing these anions and~~/or~~ cations either by an ion exchange reaction after the precipitation reaction, or by a washing after the solid state reaction.

17. (Currently Amended) A rechargeable lithium battery comprising: a powderous lithium transition metal oxide according to claim 6.